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FOR THE
UNITED STATES COMMISSION TO THE PARIS EXPOSITION OF 1900

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ON
AMERICAN SOCIAL ECONOMICS

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VII
INSPECTION OF FACTORIES
AND WORKSHOPS

BY
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NOV. 1, 1919

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BOSTON MASS. U. S. A.

THE INSPECTION OF FACTORIES AND WORKSHOPS IN THE UNITED STATES

By WILLIAM FRANKLIN WILLOUGHBY

Factory inspection in the United States has followed and grown in consequence of the enactment of laws regulating the condition of labor in factories and workshops. A little consideration will show that these two classes of legislation are entirely different in character. The province of the first is to specify conditions; of the second, to see that they are enforced. The name inspection is in some respects misleading. The real duty of factory inspectors is to enforce laws. Their powers of inspection are but incidental to this duty, and are exercised in order that the latter may be more efficiently performed. Yet, in the majority of the states having factory laws, the inspection of factories was first provided for, and the power of issuing orders directing factory operators to comply with the provisions of the laws, or at least the granting to the inspectors of adequate powers for enforcing them through judicial action, was only granted later, as the necessity for such powers became evident. In a word, the inspector of factories is primarily a police officer with special duties.

The history of the development of the official inspection of factories and workshops in the United States is like that of most social legislation. One state has led the way by the enactment of tentative measures, which it has afterwards developed as dictated by experience. Other states have profited by the example and have taken similar steps. The moral influence of the action of states on each other in the United States is

great. A movement at first grows slowly, but as state after state adopts similar measures the pressure on others to do likewise becomes stronger, and the movement tends to advance at a constantly increasing rate.

In the field of the inspection of factories we are now in the midst of such a movement. Factory inspection in the United States is of comparatively recent development. Though Massachusetts, the first state to take steps in this direction, enacted its initial law for the inspection of factories in 1877, it was not till six years later, or in 1883, that its example was followed by another state—New Jersey. Wisconsin in the same year provided for inspection through its bureau of labor. Ohio followed in the succeeding year, 1884. The movement, once fairly started, however, has spread with increasing rapidity. In 1886 New York provided for factory inspection. In 1887 Connecticut, Minnesota and Maine did likewise. They were followed by Pennsylvania, California and West Virginia in 1889, Missouri and Tennessee in 1891, Illinois and Michigan in 1893, Rhode Island in 1894, Delaware, Indiana, Nebraska and Washington in 1897 and Kansas in 1899. There are, therefore, at the present time, 21 states that have made some provision for factory inspection.

Twenty-one states out of 45 is, of course, a small proportion. As has been stated, however, it is not a completed movement that is being studied. We are rather in the position of one who in the midst of action stops to look back and see what has been accomplished in order better to determine his course for the future. In considering the progress that has been made, moreover, the comparison should be not with the total number of states, but rather with those in which the manufacturing industry is largely developed. It will thus be seen that of the New England and middle states, all of which are manufacturing states, the smaller states alone—New Hampshire, Vermont and Maryland—have no inspection. In the middle western states, Ohio, Indiana, Illinois, Michigan, Missouri, Minnesota, Kansas, Nebraska and Wisconsin have

inspection officers. The far western and the southern states, if we except the slight measure of inspection in Tennessee, West Virginia, California and Washington, are absolutely unrepresented. In these states, however, the manufacturing interests are but little developed.

Finally, it is important to recognize that the growth of factory inspection lies not only in the creation of new departments in different states, but in the enlargement of the powers and the broadening of the scope of the work of inspection services after they have once been initiated. The principal development of factory inspection is found in the development of each particular bureau.

An appreciation of this development, therefore, can only be had by studying the development of factory inspection in each state in which action has been taken, after which the general features of the movement can be summarized.

Massachusetts. The Commonwealth of Massachusetts holds the preeminent place among the states as regards social legislation. Just as it has been the first to create a bureau of labor statistics, thus setting an example that has been followed by two thirds of the other states and several foreign governments, the first to establish a state board of arbitration and conciliation, the first to regulate the employment of women and children, etc., so it was the first to provide for the inspection of factories. It would be difficult to overestimate the influence that Massachusetts' labor legislation has exerted on the other states. The imprint of its legislation can be found — frequently verbatim — in the labor legislation of all the other states.

Massachusetts inaugurated its work of factory inspection by the passage, May 11, 1877, of the law entitled "An act relating to the inspection of factories and public buildings." This act is remarkable from the fact that it immediately made broad and efficient provisions for the regulation of labor in factories. It provided for the guarding of belting, shafting, gearing, etc.; the prohibition of the cleaning of machinery when in motion; the ventilation of factories; the protection of elevators, hoist-

ways, etc. ; the furnishing of sufficient means of egress in case of fire, etc. Finally, it directed the governor to appoint one or more members of the state detective force to act as inspectors of factories, with the duties of enforcing not only this law, but other legislation relating to the employment of children and the regulation of the hours of labor in manufacturing establishments.

In 1879 this act was slightly amended by an act that abolished the state detective force and created in its stead a district police force, of which two or more members should be designated as inspectors of factories. In accordance with this act the governor appointed three inspectors, and the first report of their work was made in the year 1879. This year, therefore, really marks the beginning of factory inspection in the state.

It will not be practicable to mention all of the acts subsequently passed by which new regulations concerning the conditions of labor were enacted and the duties of the inspectors correspondingly increased. Some of the principal stages of the growth of inspection, can, however, be briefly mentioned.

In 1880 the duties of inspection were extended to mercantile as well as to manufacturing establishments, and the number of inspectors was increased to four.

In 1882 the number of members of the police force detailed for inspection work was increased to five.

In 1885 the district police force was increased to 20, of whom eight were reported in 1886 as detailed for inspection work.

In 1886 an important increase in the duties of the inspectors was made by the act of June 1, entitled "An act relative to reports of accidents in factories and manufacturing establishments." For the first time, therefore, provision was made for the reporting of accidents to laborers.

The year 1887 was prolific in labor legislation. One act was passed to secure proper sanitary provisions in factories and workshops ; another to secure their proper ventilation ;

a third to secure proper meal hours ; and another to amend the law relating to the employment of women and children. The number of inspectors was increased from eight to ten.

By an act of March 8, 1888, a much needed reform was accomplished by dividing the district police force into two separate departments of detective work and inspection. According to this act the inspection department was made to consist of ten members, not including a chief who was also the chief of the detective department. By a supplemental act of the same year the force of inspectors was increased to 20.

March 10, 1890, the law relating to the reporting of accidents was amended so as to make it relate to all proprietors of mercantile and manufacturing establishments, instead of to corporations only, as had been the case under the old law.

In 1891 the force of inspectors was increased to 26, and it was provided that two must be women. An important act of this year was that of May 28, entitled "An act to prevent the manufacture and sale of clothing made in unhealthy places," by which it was attempted to bring under regulation the growing evil of the sweating system. This act was afterwards amended in 1892 and again in 1893.

In 1893 provision was made for the appointment of an additional district police officer, with the duty of inspecting all uninsured steam boilers.

In 1894 the important service was performed of making a codification of all laws relating to labor in factories, the enforcement of which fell within the duties of the inspection department of the district police force.

In 1895 a great increase was made in the inspection duties of the state by the enactment of a law providing for the appointment of four inspectors to examine uninsured steam boilers and to act as a board to determine the competency of engineers and firemen intrusted with the care of such boilers.

The inspection force at the present time consists of one chief, 26 inspectors of factories (two of whom are women) and four inspectors of boilers.

New Jersey. New Jersey was the first state to follow the example of Massachusetts and provide for the inspection of factories. Its service was inaugurated by the act of March 5, 1883, entitled "An act to limit the age and employment hours of labor of children, minors and women, and to appoint an inspector for the enforcement of the same." By this act the governor was directed to appoint an inspector of factories at a salary of \$1200 a year, whose duties were to inspect all factories, workshops, etc., and to prosecute all violations of law before the proper judicial authorities. He was allowed expenses not to exceed \$500 a year.

In 1884, April 17, a supplemental act was passed providing for the appointment by the inspector of two deputy inspectors, at a salary of \$1000 a year each. The salary of the chief inspector was increased to \$1800, and his allowance for contingent expenses to \$1000. At the same time the original act was modified so as to enable infractions of the law to be more effectively prosecuted. The result of this act was to more than double the efficiency of factory inspection in the state.

April 7, 1885, there was passed what was known as a general factory act, which specified in considerable detail the precautions which must be taken in factories against accidents, and unsanitary conditions. The enforcement of this law was intrusted to the factory inspectors.

March 22, 1886, this act was slightly amended.

May 6, 1887, a new general factory act was passed in order to amend and elaborate the act of 1885.

In 1889 the number of deputy inspectors was increased from two to six, and the general factory act was amended, especially as regards the provision of fire escapes.

The most important subsequent acts relating to inspection were those of 1893 regulating the sweating system, the enforcement of which was intrusted to the factory inspectors, and of 1894 imposing on the factory inspectors the duty of mine inspection.

At the present time the inspection force of the state consists of one chief and six deputy inspectors.

Ohio. Ohio enacted its first law in regard to the inspection of factories April 4, 1884. This act called for the appointment of an "inspector of the sanitary conditions, comfort, and safety of shops and factories," at a salary of \$1500, and traveling expenses not to exceed \$600. The duties of this inspector were very limited indeed. Though he had the power of issuing orders, and noncompliance therewith was deemed a misdemeanor, no provisions were made whereby these infractions could be prosecuted.

In 1885 provision was made by the law for the appointment of three district inspectors.

In 1888 the reporting of all accidents to laborers was made obligatory upon manufacturers.

In 1892 a notable increase was made in the inspection force, by a law providing for the appointment of eight additional district inspectors.

The general factory laws were amended by the acts of March 17, 1892 and April 25, 1893, the purposes of which were to regulate in greater detail the conditions of labor, insure that proper precautions were taken against accidents, etc.

The year 1898, however, was especially prolific in legislation relating to factory labor. No less than eight laws of this character were passed. These laws provided for the regulation of bakeries, for which purpose two additional district inspectors were to be appointed, made obligatory the furnishing of seats and dressing rooms for female employees, ordered that blowers and exhaust fans should be provided to remove dust and other injurious substances, and made other regulations concerning the employment of children, the reporting of accidents, etc.

At the present time Ohio has one chief and 13 district inspectors of factories.

New York. New York offers an excellent example of the development of factory inspection in a state, after the initial

step had once been taken. The first act relating to factory inspection was passed May 18, 1886, and was entitled "An act to regulate the employment of women and children in manufacturing establishments, and to provide for the appointment of inspectors to enforce the same." By this act provision was made for the appointment of a factory inspector at a salary of \$2000, and an assistant inspector at \$1500 with an allotment of \$2500 for contingent expenses.

The following year the legislature greatly extended the inspection service. By an act of May 25, 1887, it authorized the appointment of eight deputy inspectors at a salary of \$1000 each, and the powers and duties of the inspectors were so increased as to give them a supervision over all of the most important features of factory life. June 15, 1889, the law was again slightly amended.

By an act of May 21, 1890, however, the law was materially changed and made more comprehensive. The most important of the new provisions were those providing for the appointment of eight women as additional factory inspectors, with the same salary as existing deputies, and increasing the allowance for contingent expenses to \$3500, exclusive of traveling expenses.

May 18, 1892, an important extension of the province of factory inspection was made by the act of that date, which attempted to bring under regulation the sweating system. Advantage was also taken of the opportunity to collect in a single act most if not all of the laws relating to factories and their inspection. In a way there was created a factory code. The force of inspectors was maintained at the same number, viz, one inspector, one assistant inspector and 16 deputies. Salaries, however, were considerably increased, that of the chief inspector being raised to \$3000, that of the assistant to \$2500, and that of the deputies to \$1200 each. Provision was also made for a suboffice in New York city.

In 1893 the law was still further amended by the act of March 22, and made more stringent in its provisions. From

the standpoint of inspection the greatest change was that whereby provision was made for eight additional deputy inspectors, of whom two should be women.

The final step in the evolution of a regular labor code was taken in 1897 when by the law of May 13 all the labor laws, whether relating to factory inspection, arbitration, employment bureaus or other matters, were consolidated in a single law. More or less important changes were at the same time made in a number of laws. The most important with which we are here concerned provided that the number of deputy inspectors should be increased to 36, of whom ten might be women. Six of them should be especially detailed to inspect bakeries and enforce provisions regarding them, and one to act as a mine inspector.

Connecticut. The state of Connecticut created its service for the inspection of factories in 1887. The act provided for the appointment of an inspector to visit factories and see that proper precautions be taken against accidents, and proper sanitary regulations observed. This law has remained practically unchanged till the present time, and provides for a system of factory inspection which is far from efficient. Though Connecticut has on its statute books laws relating to the employment of women and children, the provision of proper fire escapes, etc., their enforcement does not seem to be intrusted to the factory inspector. There is also no provision calling for the reporting of accidents in factories. The orders of the inspector consist almost entirely of directions concerning the guarding of machinery or the observance of proper sanitary measures.

The only extension of this law that has been made in the succeeding decade was by the law of May 25, 1897, which provided for the rigid inspection of all bakeries by the factory inspector. It is made the duty of this officer to see that all bakeries are "properly drained, plumbed, ventilated and kept in a clean and sanitary condition and constructed with proper regard to the health of the operatives and the production of

wholesome food" and also to enforce certain other regulations concerning separate sleeping rooms for operatives, dressing rooms, etc.

There is at the present time but one inspector, though an appropriation is made for the appointment of special agents as assistant inspectors. Though the law providing for factory inspection was passed in 1887, the first report seems to have been made for the year 1889.

Pennsylvania. Though Pennsylvania is one of the most important manufacturing states of the Union, the creation of a service of factory inspection is of comparatively recent date. The first step in this direction was taken by the act of May 20, 1889, entitled "An act to regulate the employment and provide for the safety of women and children in mercantile and manufacturing establishments, and to provide for the appointment of inspectors to enforce the same and other acts providing for the safety or regulating the employment of said persons."

Though its action was considerably delayed, Pennsylvania by this act immediately created an efficient inspection service. The act provided for the appointment of an inspector of factories at a salary of \$1500 a year, and six deputy inspectors, three of whom should be women, at a salary of \$1000 a year. The inspectors were given broad powers to order necessary changes and to enforce them through prosecutions before the proper judicial officers. Although the bureau of industrial statistics exercised no supervision over the factory inspector, the latter was required to report to the chief of that bureau, and his early reports, therefore, are included in the reports of that office.

On June 3, 1893, a new act was passed, bearing the same title as the act of 1889 and replacing the latter, which practically doubled the efficiency of the inspection service. The number of deputy inspectors was increased from five to 12, five of whom should be women, and their salaries were raised to \$1200. The salary of the chief inspector was at the same time raised from \$1500 to \$3000. The inspector was also

required to report directly to the governor. His reports, commencing with that for 1893, have therefore appeared as separate volumes.

In 1895 the duties of the inspectors of factories were still further increased by the act of April 11, which was directed to the regulation of the sweating system in the clothing and tobacco industries. In order to provide for the increased work that would thus have to be done, the number of deputy inspectors was increased from 12 to 20.

April 29, 1897, a law was passed amending in important respects the existing law regarding the employment of women and children. The provisions of the existing law were extended so as to embrace mercantile establishments, laundries, printing offices, etc.; other sections required the provision of seats for female employees, and the use of mechanical belt and gear shifters, and regulated the lighting and heating of factories and the inspection of boilers.

By two other acts of the same year, passed May 5 and May 27, respectively, the laws regarding the sweating system and the inspection of bakeries were made more rigid and effective.

Finally, by the law first mentioned, the chief inspector was provided with a chief clerk, an assistant clerk and a messenger. The inspection department at the present time, in addition to this office force, consists of 21 persons, a chief and 20 deputy inspectors. but see Eastn
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Illinois. The state of Illinois created an inspection service by the act of June 17, 1893. The immediate cause leading to its establishment was the desire to abolish the manufacture of clothing in tenements, or the so called sweating system. The act, however, not only contained revisions to this effect, but regulated the employment of women and children generally, and authorized the appointment of an inspector at a salary of \$1500 a year, an assistant inspector at \$1000, and ten deputies, five of whom must be women, at \$750 each. Power was given to them to enforce their orders through judicial prosecution.

A comprehensive inspection service, however, was by no means created, as the duties of the inspectors were strictly limited to enforcing the provisions of the act by which they were authorized, and therefore embraced little but the regulation of the sweating system and the employment of women and children. In 1897 a number of laws were enacted materially extending the system. The law of May 27 made obligatory the provision of fire escapes as required by the factory inspectors. The law of June 9 extended the law regulating the employment of children so as to include every gainful occupation, and it was broadly stated that no child under 14 years of age should be employed for wages in mercantile establishments, laundries, offices, or any such place; and the law of June 11 made detailed provisions concerning the use of blowers and fans to remove dirt and other substances injurious to the health of employees.

Rhode Island. The state of Rhode Island provided for the inspection of factories by the act of April 26, 1894. This act created at once a very efficient system of factory inspection. It not only provided for the appointment of two inspectors, one of whom must be a woman; but regulated the employment of children; directed that all elevators or hoistway entrances should be guarded; that no person under 16 years of age should clean machinery while in motion; that machinery should be guarded; that separate toilet facilities should be provided for female and male employees; that accidents should be promptly reported; and, generally, that the inspector should issue all needful orders to secure the proper heating, lighting, ventilation or sanitary arrangements of factories and workshops.

Power was given to the inspectors, moreover, to enforce their orders by prosecuting delinquents before the proper courts or magistrates.

Maine. An inspection service was first organized in Maine by the act of March 17, 1887, entitled "An act to regulate the hours of labor and the employment of women

and children in manufacturing and mechanical establishments." This act provided for the appointment of a deputy commissioner of labor at a salary of \$1000 per annum, and specified his duties to be "to inquire into any violations of this act, and also to assist in the collection of statistics and other information which may be required for the use of the bureau of industrial and labor statistics." The appointment of assistant deputies, if needed, at a salary of \$2 a day was also authorized.

It will be seen that no really effective system of inspection was provided by this act. The powers of the deputy were strictly limited to those of inspection and report. The means of enforcing his orders, without which inspection has little reason, were absolutely wanting. In 1893 the title of "deputy commissioner of labor" was changed to that of "inspector of factories, workshops, mines and quarries," a change chiefly significant as showing that the true nature of the office was becoming better understood.

By an act of the legislature, March 29, of the same year, it was made the duty of the inspector to examine as to the extent to which the law in regard to doors swinging outward was complied with, and as to the sanitary condition of factories, workshops, mines and quarries, and to report annually to the governor. It was under the provisions of this law that the first report of the factory inspector was issued in 1893. These reports are incorporated in the reports of the bureau of industrial and labor statistics. Though the law states that it is the duty of the inspector to enforce certain laws, there is no way specified by which this shall be done, and the reports of the inspector do not indicate that he ever ordered any changes to be made, or attempted any prosecutions in order to enforce labor laws.

Indiana. No provision for the inspection of factories in Indiana was made till the passage of the law of March 2, 1897. This law was a very comprehensive enactment. It provided for the more efficient regulation of the employment of women

and children, contained provisions for the regulation of the sweating system, and finally created the offices of inspector and assistant inspector of factories. The duties of these officers which were to enforce the labor laws of the state comprehended the enforcement of laws relating to the employment of women and children, the guarding of machinery, the lime washing of factories, the provision of fire escapes, the reporting of accidents, and numerous other obligations imposed on factory owners.

Though one of the latest states to take action, Indiana has by this law provided one of the most effective factory codes of any of the states.

Michigan. The first bill to provide for factory inspection in Michigan was introduced in the state legislature in 1891 but failed to pass. In 1893 another bill was introduced, passed and went into effect August 25, 1893. The bill as introduced, contemplated a separate bureau. As passed, it provided that factory inspection should be a part of the work of the bureau of labor and industrial statistics. The title of this act was "An act to regulate the employment of women and children in manufacturing establishments in the state, to provide for the inspection and regulation of such manufacturing establishments, and to provide for the enforcement of such regulation and inspection."

This act provided for the annual inspection of manufacturing establishments by the commissioner or deputy commissioner of labor, or by persons acting under their authority, for the payment of which \$4000 should be annually appropriated. In addition to creating an inspection service it also embraces a great many provisions of a general factory act. It thus makes it the duty of the inspectors to see that proper safeguards are taken against accidents; that factories are provided with fire escapes; that suitable toilet facilities are provided for male and female employees in different rooms; that exhaust fans are provided where necessary; and most important of all, the inspectors were given the power to

enforce their orders by the prosecution of delinquents in the courts of competent jurisdiction.

Michigan thus provided for an efficient system of factory inspection as far as the powers and duties of the inspectors were concerned. The appropriation of only \$4000 a year for this work was, however, far from sufficient to carry out the work, and the mistake was made of making inspection a branch of the bureau of labor instead of an independent service.

For the first year four inspectors were appointed, and for the second year five inspectors. In 1895 the act was amended by raising the appropriation for inspection from \$4000 to \$8000 a year. No limit was placed on the number of deputies that might be appointed save by the amount of the appropriation.

Further amendments were made in 1897 by the laws of April 24, May 17 and June 2. By these acts the annual appropriation for factory inspection was increased to \$12,000 and it was ordered that all manufacturing establishments should be inspected at least once in each year; the law relating to child labor was amended; the minimum age at which children could be employed being placed at 14 years; and the provision of safety appliances for all elevators was made obligatory.

Missouri. By act of May 19, 1879, Missouri created a "bureau of labor statistics and inspection of factories, mines, and workshops." In spite of its title, however, this bureau by no means constituted a bureau of inspection. An examination of the reports of the bureau shows that its efforts have been almost wholly directed to securing information, and not to inspection with the view of enforcing particular laws.

On April 20, 1891, an act was passed which made a considerable number of technical provisions concerning the provision of safeguards against machinery; the guarding of elevator shafts; the reporting of accidents; the provision of fire escapes, etc. This act, however, was made to apply only

to cities and towns with a population of 5000 or over, and made it obligatory on such to appoint an inspector with deputies to inspect all factories employing ten or more persons and to see that the provisions of the act were complied with. These inspectors were directed to report semi-annually to the commissioner of labor.

It would be difficult to conceive of a system less likely to be productive of valuable results than this localization of the work of inspection and distribution of authority. In fact, the commissioner of labor has reported during the succeeding years that the law has been ignored by a great many cities of the state. As yet, therefore, Missouri can not be said to possess any very effective system of factory inspection.

Wisconsin. In Wisconsin the law of April 12, 1883, providing for the creation of a labor bureau, made it a part of the duties of the commissioner of labor to inspect all factories and to see that the laws regarding fire escapes, the protection of employees against accidents, the employment of women and children, etc., were complied with, and to enforce the same by prosecutions before the courts. It was manifestly beyond the power of the commissioner to do more than slightly fulfil these duties.

April 4, 1885, the labor bureau was reorganized, and among other changes provision was made for the appointment of a special inspector of factories as one of the officers of the bureau. At the same time the laws relating to the conduct of labor in factories were considerably elaborated and made more stringent. This law thus provided for a fairly complete system of factory inspection, though but a single inspector was provided for, and he was made an officer of the labor bureau instead of an independent official.

The first report of inspection was made for the years 1885 and 1886, and is included in the biennial report of the commissioner of labor. Subsequent reports have appeared in the same way.

In 1887 the inspection laws were enlarged; authority was

granted to appoint two inspectors instead of one, and the great defect of prior legislation was remedied by attaching penalties for the violation of the factory acts and increasing the powers of the inspectors to enforce their orders and prosecute offenders.

Since this date other acts slightly amending the factory acts have been passed, but the inspection service remains as it was then.

Minnesota. The act of 1887 creating a bureau of labor statistics in Minnesota specifies as a part of the duties of the commissioner that he shall cause to be inspected the factories and workshops of the state, "to see that all laws regulating the employment of children and women and all laws established for the protection of the health and lives of operatives in workshops, factories, and all other places where labor is employed are enforced." In case his orders are not complied with, he is directed to make formal complaint to the county attorney, which officer must then proceed to the prosecution of the offender.

The first material change in this law was made in 1893. This act, while leaving inspection a part of the duties of the labor bureau provided for the appointment of a special inspector of factories and two deputy inspectors. The duties of these officers broadly stated are "to cause to be enforced all laws regulating the employment of children, minors, and women; all laws established for the protection of the health, lives, and limbs of operatives in workshops and factories, on railroads and in other places, and all laws enacted for the protection of the working classes."

The reports of these inspectors are contained in the biennial reports of the commissioner of labor, the first inspection report being that for the years 1893 and 1894.

Delaware. The state of Delaware inaugurated a factory inspection service by a law enacted May 10, 1897. This law had special reference to the regulation of the employment of women, and referred only to the incorporated towns and cities

of the county of New Castle, or the county in which the only two important cities of the state, Wilmington and Newark, are situated. This law requires that wherever ten or more women are employed there must be provided a separate room in which the women can dress, wash and lunch, separate water closets for the two sexes, and that rests for females must be furnished. Finally, provision is made for the appointment of a female inspector by the chief justice of the state to enforce the provisions of the act. She is required to report annually to the chief justice. Her salary is but \$300.

Nebraska. The law of March 31, 1887 creating a bureau of labor in Nebraska, provided that it should be a part of the duty of the commissioner of that bureau to visit industrial establishments and see that the laws in respect to child labor, hours of labor for women and children, fire escapes, and similar enactments were enforced. As no provision for deputy inspectors was made, no effort to carry out a system of the inspection of factories was ever attempted.

Washington. The legislation of the state of Washington is similar to that of Nebraska. By the law of March 3, 1897, provision was made for the appointment of a commissioner and an assistant commissioner of labor to act as "factory, mill and railroad inspector." These officers were given the duties, among others, of enforcing the laws relating to the employment of women and children and having for their purpose the protection of the lives and health of employees. It is doubtful if any effective system of factory inspection can be created under this law.

Tennessee. Such a slight measure of factory inspection has been provided for in Tennessee that the barest mention will be sufficient. The act of March 21, 1891, creating the bureau of labor and mining statistics, also makes it the duty of the commissioner to inspect factories and workshops. As the power of the commissioner is limited to investigations, and his time is so largely taken up with his other duties, practically nothing is accomplished in the way of real factory inspection work.

California. In California provision for a measure of factory inspection was made by a law passed in 1889. This law made it obligatory on factory owners to keep their establishments in a clean and hygienic condition, to guard against the formation of dust, to provide seats for females where practicable, etc. Another law passed in the same year regulated the employment of children. The enforcement of both of these laws was made a part of the duties of the commissioner of labor, and to that extent this officer serves as a factory inspector, though there seems to be no express provision of law requiring him to visit industrial establishments.

West Virginia. The act of 1889 creating a state bureau of labor in West Virginia provided that the commissioner of labor should "once at least in each year visit and inspect the principal factories and workshops of the state, and shall on complaint or request of any three or more reputable citizens, visit and inspect any place where labor is employed, and make true report of the result of his inspection." He is then directed to report any infraction of the law that he may discover to the state's attorney for prosecution. As this law, however, contains absolutely no provisions regulating labor, and there are no other laws of this character in the state, it would seem that the commissioner has properly speaking no duties under this law, and the state consequently no effective system of factory inspection.

Kansas. In 1899 Kansas reorganized her bureau of labor. The chief of this bureau is styled both commissioner of labor and state inspector of factories, and, as these two designations indicate, has the twofold duty of collecting statistics of labor and inspecting factories. He is directed to enforce all the labor laws of the state.

In this history of the organization of factory inspection in the individual states, special attention should be given to the kind of administrative organization that has in each case been selected. This is one of the most important considerations involved in the question of factory inspection, for on it de-

pendes to a large extent the effectiveness of the system that has been adopted. Eleven of the 21 states — Maine, Michigan, Missouri, Minnesota, Wisconsin, Nebraska, Washington, California, West Virginia, Kansas and Tennessee — have connected the duty of inspection with the bureau of labor statistics. The adoption of this policy is in every way regrettable. An inspection service, to accomplish the best results, should be absolutely independent of all other work.

The function of the factory inspector is to see that certain laws relating to the conduct of labor in factories are enforced, and to do this he should possess a certain technical knowledge, such as that relating to machinery, hygiene, ventilation, construction of buildings, etc. The duties of the commissioner of labor are to collect facts and present them properly. The greatest objection to joining the two offices, however, is not that it is difficult to find a man with the mental equipment for them both, but that the two classes of duties are largely antagonistic. The labor commissioner has to depend on the good will of the employers for his information, while the inspector has frequently to oppose the latter's wishes.

The advisability of an independent inspection service can not be shown better than by reproducing the remarks of the chief factory inspector of New York concerning the proposition to combine the three services of the bureau of labor statistics, the board of arbitration and office of factory inspection.

Such a plan, if carried out would be to the detriment of the work of factory inspection. The duties of a factory inspector are of a police nature. He must see that certain provisions and restrictions of law are obeyed; that children of certain ages must not be employed; that guards must be attached to dangerous machines; that women and children shall not work during certain hours; that unsafe buildings must be made secure, and a score of other matters, concerning all of which he must exercise the compulsory arbitrary powers of the state. In case of refusal to comply with his orders, it involves upon him to swear out warrants for the arrest of the delinquent persons and prosecute them to the full extent of the law. These duties, which are only briefly outlined, are not compatible with the work of gathering statistics and arbitrating differences between employers and employed,

especially as the work of factory inspection may often times bring him into contact, if not into conflict with the very persons to whom appeals must be made for reliable statistics or on whose sense of fairness must rest the conciliatory policy of arbitrating wage or other difficulties in labor controversies . . . It will thus be seen that the duties of the commissioners of statistics and arbitration and those of the factory inspector are in no way harmonious and are in many respects antagonistic and dissimilar.

Experience has more than demonstrated the correctness of this reasoning. In those states in which factory inspection has been joined to the bureau of labor relatively slight results have been accomplished, and one might almost say that a real system of factory inspection exists only in the 10 states of Massachusetts, New Jersey, Ohio, New York, Illinois, Connecticut, Pennsylvania, Indiana, Michigan and Rhode Island, which have independent inspection services.

The duties and powers of inspectors of factories. We now turn to a consideration of the character of the work that has been assigned to factory inspectors; in other words, to their duties and powers. In the historical sketch of the development of factory inspection no attempt was made to state all of the duties that were placed on factory inspectors in each state. Only such were specified as tended to show the growth of the service in each state. In the following table the attempt has been made, after a careful examination of the laws relating to factory inspection, or laws the enforcement of which is intrusted to the inspectors, to present in a concise form the duties of factory inspectors in each of the 20 states. The adoption of this method of presentation makes it possible to compare at a glance the extent of the services in the different states. This table, of course, only indicates the extent of the duties of inspection, but throws no light on the efficiency with which they are performed. Thus a state that has enumerated but a few duties may provide for an adequate force of inspectors and really accomplish more valuable results than another state with an elaborate inspection law, but inadequate provisions for its enforcement.

This table does not pretend to show absolutely all the duties of factory inspectors. Frequently the laws are so generally worded that it is largely left to the discretion of the inspectors to determine whether the conditions under which factory employees labor are sanitary and proper precautions are taken against danger. It does show, however, the extent to which the states have specified certain regulations that must be observed, and consequently the features with which it is believed factory inspection should be concerned. The states having provisions concerning the subjects shown in the first column are indicated by a dash. It is believed that this table gives a very approximate idea of the scope of the duties of factory inspectors in the United States.

An examination of this table shows in the clearest way the character of factory inspection as practised in the United States. It is at once evident how largely legislation in one state affects legislation in the others. A state enacting new laws frequently but copies the legislation of the other states.

As regards the duties of inspectors, it will be seen that they may be divided into a number of quite distinct classes. First, there is the enforcement of certain general labor laws relating to the employment of women and children, the provision of seats for females, and of separate toilet facilities for the two sexes, the payment of wages in cash and at intervals of certain frequency, and the allowance of an adequate length of time to women and children at noon for their lunch.

A second class of duties is that relating to the provision of suitable means of egress in case of fire. This finds expression in the requirement that fire escapes shall be placed on factories, and that doors shall be so hung as to open outward and shall be kept unlocked during working hours.

A third and most important class is that relating to the obligation of factory operators to take all needful precautions to protect workingmen against accidents. This is done by requiring that machinery and vats containing molten metal or hot liquids must be properly guarded; that machinery in

DUTIES OF INSPECTORS IN THE UNITED STATES

Duty of inspectors to enforce laws concerning:	Maine		Massachusetts	Rhode Island	Connecticut	New York	New Jersey	Pennsylvania	Delaware	Ohio	Indiana	Illinois	Michigan	Wisconsin	Minnesota	Missouri	Nebraska	Tennessee	Washington	Kansas	California
Employment of children
Employment of women
Payment of wages
Lunch hour, women and children
Seats for females
Separate toilet facilities for the two sexes
Guarding machinery
Cleaning machinery in motion by children and women
Mechanical belt and gearing shifters
Communication with engineer's room
Guarding vats containing molten metal or hot liquids
Railings on stairways
Regulation of dangerous or injurious occupations
Use of explosive or inflammable material
Exhaust fans, blowers, etc., for removal of dust, etc.
Guarding elevator and hoistway openings
Fire escapes
Doors to swing outward; to be unlocked
Sanitary condition
Ventilation
Lighting
Heating
Overcrowding
Limewashing or painting walls
Reporting accidents
Regulation of sweating system
Inspection of mercantile establishments
Inspection of mines
Inspection of steam boilers
Inspection of school houses, theaters, etc.
Regulation of bakeries
Approval of plans for factories

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motion must not be cleaned by women or minors; that mechanical belt and gear shifters be provided; that a speaking tube or some other means of communication be provided between any room where machinery is used and the engineer's room; that elevators be provided with safety appliances and that they and all hoistway openings be properly railed off; that sides or railings be placed on all stairways; that there be exhaust fans to prevent dust or other deleterious products from being inhaled by the operatives; that no use be made of explosive or highly inflammable compounds except under special precautions; and, finally, that exceptional precautions, the determination of which lies largely in the discretion of the inspectors, be taken in the case of all dangerous or injurious occupations.

Fourth, there are the general provisions relating to the sanitary condition, ventilation, lighting, heating and overcrowding of factories. Under sanitation it is usual to specify that water closets, privies and drains shall be tight and kept in good condition. A few states, it will be seen, require walls to be lime washed or painted once a year.

Fifth, there is the duty of inspectors to keep a record of all accidents to employees of factories, and to report annually concerning them. This information is obtained through the obligation placed by law on all employers of labor to report all accidents to the inspection department. There are few who are interested in or concerned with the inspection of factories who fail to recognize the utility of obtaining as nearly complete data as possible concerning the occurrence of accidents to laborers, their cause, character, etc. Such information is desirable, first of all, in order to determine which are the industries and the particular manipulations or machines that are responsible for accidents. It is thus possible to determine what steps should be taken for lessening their frequency. Secondly, it is necessary in order that the public and law makers may be made to realize the importance of requiring the provision of safety appliances and of the rigid enforcement of precautionary regulations.

The collection of this information, if it is to be made, naturally falls within the province of the factory inspectors. It is much to be regretted, therefore, that these officers for the most part either have not been given the power to obtain this information or have not organized their inquiries on a sufficiently broad basis. Though nine states, as will be seen by the table, provide in their factory laws that accidents shall be reported by manufacturers, in none of them is there any pretense that anything like complete returns of accidents are obtained. Even in the cases of the accidents that are reported, the description of their causes, results and character is far from sufficiently full. The laws directing the reporting of accidents usually read that the employers of labor shall report to the chief factory inspector all accidents causing the death of an employee or his incapacity to work for a certain duration of time. It is also to be regretted that no uniformity exists in such data in the different states as regards the classification of accidents either by causes, extent of injury, or party at fault. The very important classification of accidents into those causing death, permanent total, permanent partial, temporary total and temporary partial incapacity is in no case made.

Any attempt to make a study of accidents to labor in factories in the United States is, therefore, out of the question. The only point for congratulation is that the necessity for reporting accidents has been recognized by a number of states, and that thus a beginning has been made that may receive a fuller development in the future.

Within recent years the office of inspector of factories has become of increased importance through the development of the so called "sweating system," and the attempt to control or abolish it through legislative enactments. Wherever laws have been enacted for this purpose their enforcement through the factory inspectors of the state has constituted an essential feature of the law. In these states, therefore, the regulation of this system of work has become one of the most important duties of the factory inspectors.

The above classes constitute the regular and ordinary duties of factory inspectors. There has been a tendency, however, to impose on these officers certain additional duties which can be and frequently are intrusted to other officers; such, for instance, are the inspection of mines, the inspection of steam boilers, the inspection of schoolhouses, theaters and other public buildings.

Finally, in recent years, a number of states have passed special regulations concerning the conduct of the bread making business. These provisions are that such work shall not be carried on in cellars; that workrooms shall not be used as sleeping rooms; that privies and water closets shall not be maintained within a certain distance of the bakeries, etc.

Of the states, Massachusetts not only possesses the most advanced and detailed code of labor laws, but has made the most efficient provision for their enforcement. No better method can, therefore, be adopted for showing the character of factory inspection in the United States, where it is best developed, than to reproduce the summary of the duties of the inspectors of this state, as recapitulated by the chief factory inspector in his report for the year 1895. There is all the more excuse for reproducing the duties of the inspectors of this state, since it is to its laws that all of the states turn when contemplating similar legislation. On page five of this report the chief inspector says:

There are now 26 officers exclusively employed in the inspection department. Some idea of the extent and nature of the duties of the inspectors may be had by reference to the statutes defining them; but not even the detailed reports of the several inspectors made to this office can give, to those not familiar with the matters discussed, an adequate idea of the vast amount of labor performed by this department. Its duties embrace the enforcement of the laws relating to the hours of labor; the protection of operatives from unguarded machinery; the employment of women and minors; the schooling of children employed in factories and workshops; the preservation of the health of females employed in mechanical manufacturing, and mercantile establishments; reports of accidents in manufactories; safety appliances for elevators; provisions for escape from hotels and other buildings in case of fire; proper ven-

tilation for factories and workshops, and uniform meal hours for children, young persons, and women employed therein; the suppression of nuisances from drains, and provisions for water closets, etc., for the use of each sex employed in factories and workshops, and various other sanitary regulations; the inspection of buildings alleged to be unsafe or dangerous to life or limb, in case of fire or otherwise; the submission to the inspector for approval of a copy of plans and specifications of any building designed for certain public purposes, as factory, workshop, mercantile structure, hotels, apartment houses, lodging or tenement houses, above a certain height; communication between the engineer's room and each room where machinery is run by steam, in every manufacturing establishment; proper safeguards at hatchways, elevator openings, and well holes in public buildings, factories, and mercantile establishments, forbidding the use of portable seats in isles or passageways in public halls, theaters, schoolhouses, churches, and public buildings during any service held therein; requiring fire-resisting curtains, approved by inspectors, for use in all theaters, etc.; competent watchmen, lights in hotels, gongs or other proper alarms, and notices posted describing means of escape from fire in boarding and lodging houses above a certain size, family and public hotels; fire escapes on tenement or lodging houses three or more stories in height; prohibiting during working hours the locking of any inside or outside doors of any building where operatives are employed; public buildings and schools in respect to cleanliness, suitable ventilation, and sanitary conveniences; the weekly payment of wages by certain corporations to each of their employees; the inspection of uninsured steam boilers; the examination as to the competency of engineers and firemen in charge thereof; the enforcement of the act relating to the manufacture and sale of clothing made in unhealthy places; the enforcement of the act relating to the heating of street-railway cars, and the enforcement of the act requiring specifications to be furnished to persons employed in cotton, worsted, and woolen factories.

It is not necessary at this date, even were this the place, to attempt to show the necessity for, or all the advantages resulting from factory inspection. Some of the most important of these latter, however, will bear mention. If it is desirable to have factory and labor laws, it is certainly desirable to have them enforced, and experience has demonstrated that without inspection many labor laws will remain dead letters. But apart from performing the duties for which they are created, they indirectly perform many other services. Many of the inspectors of factories report that they have been of con-

siderable use in spreading information concerning the best mechanical devices for guarding against accidents. In the performance of their duties they become acquainted with the best contrivances, and are able to suggest their employment in factories inefficiently equipped. The directors of these latter are often only too thankful to have them called to their attention. The reports of the inspectors, moreover, are becoming more and more valuable as repositories of information concerning labor conditions of a character that can not be obtained elsewhere. They contain descriptions, accompanied by illustrations, and plans of the best devices for guarding machinery, of protecting elevators and shaft openings, of carrying away dust and odors by the use of exhaust fans, of the best forms of fire escapes, of plans for ventilating and heating factories, schoolhouses and other buildings, etc. The practical contact of inspectors with labor conditions enables them to determine with special accuracy the results of labor legislation, and to recommend with authority its amendment or elaboration.

In concluding this account of the inspection of factories and workshops in the United States, some mention should be made of the International association of factory inspectors. This organization though created as the result of private efforts, yet may be said to have an official standing. It was created and held its first annual convention in 1887. The object of the association is to bring together annually all officers of the government in the United States and Canada whose duties relate to the inspection of factories, workshops and public buildings. It is scarcely necessary to comment on the utility of such a gathering. The majority of the inspectors are new and inexperienced in their duties. They can thus avail themselves of the experience of the older inspectors. Specially can the very desirable object of rendering more uniform the legislation and practices of the states be advanced. The report of the proceedings and the papers read at the conventions are not only separately published, but are frequently included as appendixes to the reports of individual states.

BIBLIOGRAPHIC NOTE

The primary and most important source for the study of legislation in the United States concerning the inspection of factories is of course the reports of the chief inspectors of the different states having such services. The proceedings of the annual meetings of the International association of factory inspectors are also of great value. The laws concerning the subject can probably best be found in the special report of the U. S. Department of labor on labor laws, 1896, and the bulletins of the same department. The present paper is but the elaboration of a report made to the *Congrès international des accidents du travail et des assurances sociales*, Brussels, 1897, and published in the proceedings of that body. It was also published in the bulletin of the Department of labor, No. 12, September, 1897. The Handbook of the Labor Law of the United States, by F. J. Stimson, 1896, can also be consulted with profit.

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